

User manual LXP series





Content




1. Important safety information	3
1.1 Explanation of terms	3
1.2 General safety instructions	3
1.3 Acoustic safety instructions	3
1.4 Electrical safety instructions	4
1.5 Connections and wiring	4
1.6 Operating conditions	4
1.7 Storage and transportation	5
2. The Product	6
2.1 Product introduction	6
2.2 Scope of supply	6
3. Setup and operation	6
3.1 Installation and mounting	6
3.1.1 Secondary backup	6
3.1.2 Slot nut mounting	6
3.1.4 Rotating the logo	7
3.1.3 CC-S (BP0056) & CC-L (BP0057)	7
3.2 Connections	9
3.3 setup and configuration	9
4. Technical data	11
5. Servicing and repair	13
6. Disposal	13
7. EU declaration of conformity	13
8. Contact address	13

1. Important safety information

Please read and follow these safety instructions and any other instructions given for your Fohhn products before using or installing them. Always keep the instructions near the devices. Reading them does not replace the need for awareness of and compliance with currently applicable national safety regulations and standards, or the observance of safe on-site working methods. All information published here is based on data that was available at the time of publication. We expressly reserve the right to make any changes.





This document is intended exclusively for qualified specialist personnel or people with appropriate technical training. The information contained herein is intended for the installation, maintenance and repair of this product and requires a thorough understanding of the technical aspects and applicable safety standards. By using this product, you agree that you have the necessary professional competence to install, maintain or repair it safely and properly. Any actions outside your scope of authority may pose risks and are not recommended. If you have any doubts or questions, please contact our technical support or contact authorized specialist retailers. The information presented here is intended as ancillary advice and does not affect the user's ultimate responsibility to ensure safe operation on site.

1.1 Explanation of terms


	Danger!	This signal word indicates a hazard with a high risk level, which, if not avoided, could result in death or serious injury.
	Warning!	This signal word indicates a hazard with a medium risk level, which, if not avoided, could result in death or serious injury.
	Caution!	This signal word indicates a hazard with a lower risk level, which, if not avoided, could result in minor or moderate injury.

1.2 General safety instructions

All components required for the mounting or suspension of a Fohhn system have been designed and constructed in accordance and compliance with the following regulations that are applicable in Germany: DGUV V17 (formerly BGV-C1), DGUV I215-313 (formerly BGI 810-3), DIN EN 1993-1-1 and DIN EN 1999-1-1.

	Danger!	To avoid danger to life or limb, please ensure that all personnel involved in installing or deconstructing such a system have read and understood the contents of this user manual. All personnel should be aware of local regulations concerning workplace safety. It is strongly recommended to wear suitable personal protective equipment during installation.
	Warning!	<p>To prevent injury caused by a collapsing or falling system,</p> <ul style="list-style-type: none"> • this device must be securely mounted in accordance with the rigging instructions and current safety guidelines. Only use the specified and original Fohhn mounting accessories and never exceed their maximum load capacity. • the load limit of any component that will be used for system suspension (including shackles, chains and hoists) must not be exceeded. To comply with local safety regulations, these load limits may, in certain circumstances due to underlying safety factors (operating ratios), need to be recalculated and, if necessary, reduced. • the device must be regularly inspected for any signs of wear or loosening of the rigging connections. • it is necessary to ensure that the mounting points on a building, scaffolding or truss structure have sufficient load-bearing capacity and are structurally viable. • all components of a hung/"flown" device must be visually inspected before installation. Any component showing missing parts, deformations, cracks, corrosion, fractured welds or other signs of wear must not be used under any circumstances. • it is strongly recommended that a flown (loudspeaker) system should be landed and dismantled if local wind intensity is equal or greater than 6 Bft (Beaufort Scale).
	Warning!	To prevent injury through accidents, the stability of the entire system (e.g. during assembly, in a vertical stack or when using a pole-mounted flange) must be guaranteed. Make sure that the system cannot topple over (e.g. as the result of a sloping surface or wind) and that it is protected against being hit from people or vehicles, for example.
	Caution!	<p>To avoid injury,</p> <ul style="list-style-type: none"> • the device must be stored, installed and operated well away from children. • no one must climb on either flown or stacked loudspeaker systems. • the device must be taken out of operation, marked appropriately and protected against accidental use if it shows visible signs of damage, appears to contain loose parts, is not working correctly or has been subjected to poor transportation conditions (e.g. with unsuitable packaging). If necessary, please contact your Fohhn retailer and the transportation company immediately.



1.3 Acoustic safety instructions

	Warning!	Fohhn systems are capable of generating very high sound pressure levels that can cause irreparable hearing damage. To avoid potential damage to your hearing, never stand in the immediate vicinity of the system when
-------------------------------------------------------------------------------------	-----------------	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------


		<p>it is in use. Keep more than 5 metres away from powerful Fohhn systems, but also at least 1 metre away from smaller ones for the near field or smaller interior spaces.</p> <p>To prevent both hearing impairment and damage to the device, avoid the following while the device is in operation:</p> <ul style="list-style-type: none"> • acoustic feedback • high powered, permanently distorted signals • impulse noises, which may occur when some other device in the signal chain is switched on or off, connected or disconnected from the system (e.g. a mixing desk, audio matrix or controller).
--	--	------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1.4 Electrical safety instructions



All Fohhn products that are or contain Fohhn power amplifiers are protection class 1 appliances. They are built and certified in accordance with the VDE safety measures for electronic devices and, safety-wise, leave our factory in perfect condition. The devices comply with all currently applicable EMC directives: Confirmed by the attached CE marking.

	Warning!	<p>To minimize the risk of electric shock,</p> <ul style="list-style-type: none"> • the mains plug grounding pin must never be separated and under no circumstances should the plug be taped up. • the device must only be connected to a professionally tested shockproof socket. • the amplifier housing and loudspeaker enclosure must never be opened. It does not contain any components that can be repaired by the user. In the case of a defect, please consult qualified service personnel and/or the Fohhn dealer. <p>Please also ensure that the local mains supply voltage matches the power supply voltage specified on the device.</p> <p>To minimize the risk of an electric shock or fire,</p> <ul style="list-style-type: none"> • ventilation slots must not be covered with objects (e.g. protective rain covers). • the device may only be used in accordance with its specified IP code.
	Caution!	<p>To avoid damaging the device, do not leave the power cable plugged in if the device is not going to be used for a while. Remove the plug from the mains socket to completely disconnect the device.</p>

1.5 Connections and wiring

	Warning!	<p>Please note the following when wiring up your system:</p> <ul style="list-style-type: none"> • Wiring of loudspeakers systems should only be carried out by suitably qualified personnel. • Only use cabling- and connector materials that meet professional standards and are working faultlessly. • Only use properly shielded plugs and cables with a sufficient cross section. • Only use power cables with a fully intact grounding pin. • Protect any laid cables from unnecessary traction. • Never use any signal or power cables for mounting, hoisting or securing a system. • Note the respective pin assignment of audio and data cabling.
-------------------------------------------------------------------------------------	-----------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

1.6 Operating conditions

	Warnung!	<p>The device should be immediately inspected by a Fohhn approved service partner if</p> <ul style="list-style-type: none"> • the mains power socket is damaged, • a foreign body or liquid has got into the interior of the device, • the device is not working normally i.e. it is showing marked differences in performance, • the device is damaged (e.g. after a fall).
	Caution!	<p>Please note the following when operating your Fohhn system:</p> <ul style="list-style-type: none"> • The permitted ambient temperature of the device during operation ranges from 0 °C to +40 °C. A short period of use outside this temperature range is possible, but not advisable. • The device is intended for use in a dry environment with normal levels of dust and humidity in the air. Please observe the IP code. • Never expose the device to any aggressive chemical fluids or vapours. • Always make sure that heat can be dissipated via the rear surface of the device enclosure. Maintain these gaps: left/right side >5 cm, back >10 cm, top >10 cm. • Always make sure that the device is well ventilated. • To clean your Fohhn product, use a dry or slightly damp but well-wrung cloth. Ensure that the device is disconnected from the power supply when cleaning.

Information on abnormal operation: If the permissible operating temperature of a powered Fohhn device (active speaker system or amplifier) is too high (over 75 °C), the device will shut down automatically to protect itself. As soon as the temperature returns



to within the normal operating range, the device will automatically power up again. The temperature of the Fohhn system can be monitored in Fohhn Audio Soft. Shutdown is getting more likely if the product is exposed to direct sunlight or very high environmental temperatures.

1.7 Storage and transportation

Please note the following:

- The device should only be transported in its dedicated transport case.
- Store the device in a dry environment with a constant ambient temperature to avoid condensation.
- The permitted ambient temperature range for storing the device is -10 °C to +70 °C.
- Due to fluctuations in temperature during transportation and storage, condensation may start to build up on the surface of the device. Before operating the device, examine its surface for any signs of moisture. If this is the case, allow the unpacked device to acclimatise for two hours in the environmental temperature before using it.

2. The Product

2.1 Product introduction

LXP series is a passive fullrange line source system. It was developed for high-quality transmission of speech and music even in difficult acoustic environments. LXP is the even more powerful successor to the renowned Fohhn LX product line. To eliminate the need for mechanical tilting of the product in many applications, the sound dispersion is tilted downwards by 5°. This does not only apply to the high frequency driver – The sound from the 4" chassis is also tilted by a fixed 5° through passive beam steering. This and the new, continuous T-slot allow easy and flexible mounting. The redesigned connector panel allows easy attachment of add-ons such as SpeakOn® adapter modules and weatherproof cable glands. The following table provides an overview of the components in the LXP series loudspeakers:

Product	Components
LXP-10	1x 0,75" tweeter + 1x 4" long excursion woofer (coaxial)
LXP-60	1x 1" driver + 4x 4" long excursion woofer
LXP-100	1x 1" driver + 8x 4" long excursion woofer
LXP-150	1x 1" driver + 12x 4" long excursion woofer
LP-220	2x 1" driver + 18x 4" long excursion woofer

2.2 Scope of supply

Every Fohhn product is examined to the highest quality and safety standards before despatch. Please examine your new product carefully for any signs of damage that may have occurred during transportation and, if necessary, inform your Fohhn retailer and the transport company immediately. Please also check that the packaging includes all components belonging to the product. If anything is missing, please let your Fohhn retailer know immediately.

Your Linea LXP system contains the following components:

- 1x LXP series loudspeaker
- 1x user manual (or available online at www.fohnn.com)
- 1x safety instructions
- slot nuts

3. Setup and operation

3.1 Installation and mounting

All LXP series loudspeakers have a continuous T-slot on the rear of the cabinet. Along this T-slot, cables can be routed, stand, wall and ceiling brackets can be installed, or additional accessories such as safety brackets and flying adapters can be mounted. The loudspeaker can be attached using the slot nuts and screws that are included.

3.1.1 Secondary backup

Only Fohhn Safety Brackets SB-S and SB-L may be used as slings for the secondary securing of a loudspeaker from the LXP series. The maximum permissible load of the Safety Brackets and all securing elements used (safety ropes, quick links, etc.) must not be exceeded at any time.

Slings and safety elements (such as safety ropes) must always be attached in such a way that they do not allow any fall path. If the loudspeaker has to be subsequently aligned, the maximum fall path of 20 cm must not be exceeded - regardless of the type of attachment.

3.1.2 Slot nut mounting

Inserting the slot nut is described in the following steps.

- Insert the slot nut into the T-slot.

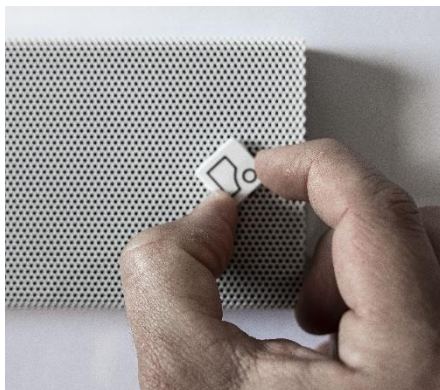


- Press the slot nut into the T-slot with slight pressure.
- Align the slot nut correctly so that a screw can be screwed in. A screwdriver or an Allen key can be used for this purpose.

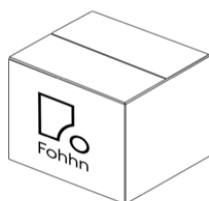


3.1.4 Rotating the logo

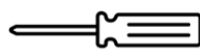
The loudspeaker logo can be rotated if it is not positioned correctly. To rotate a rotary logo 90 degrees, hold it with two fingers and turn it firmly until it locks into place. Then check the alignment and release.



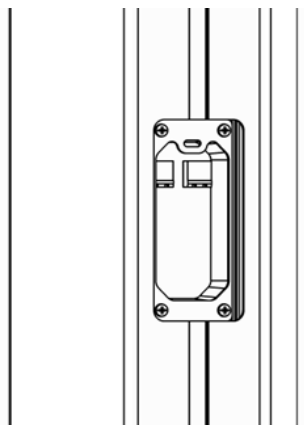
3.1.3 CC-S (BP0056) & CC-L (BP0057)



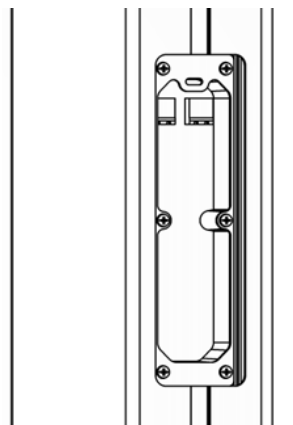
PZ1



1.

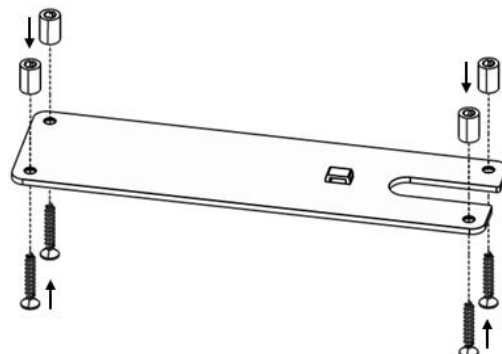
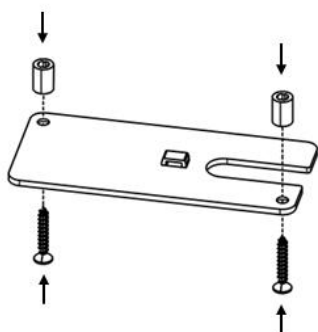


BP0056

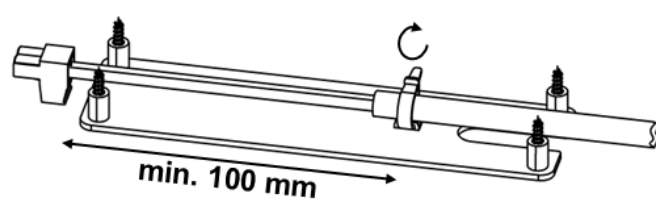
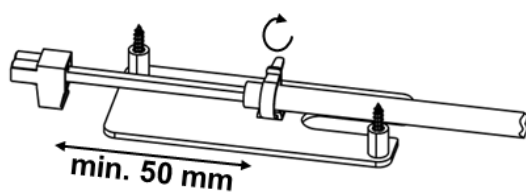


BP0057

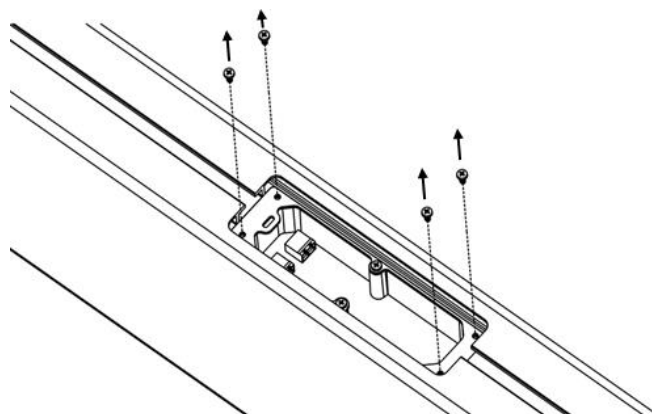
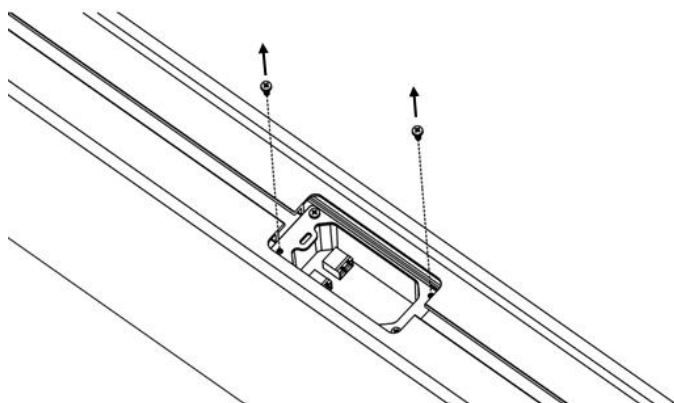
2.



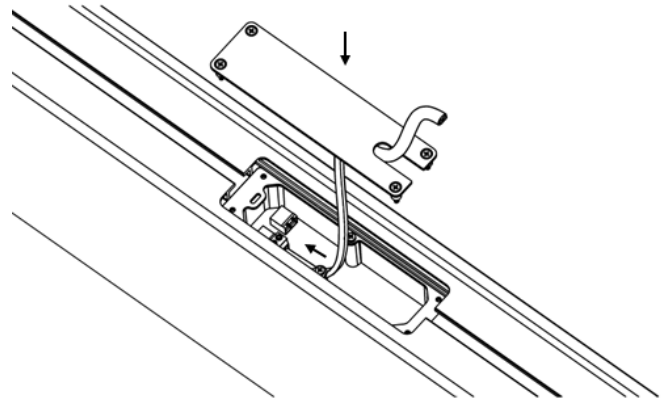
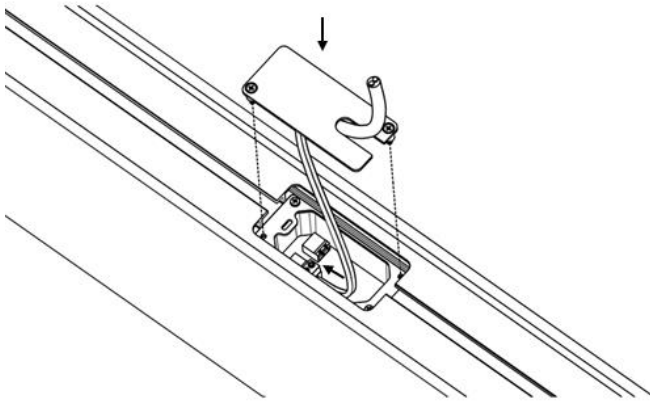
3.



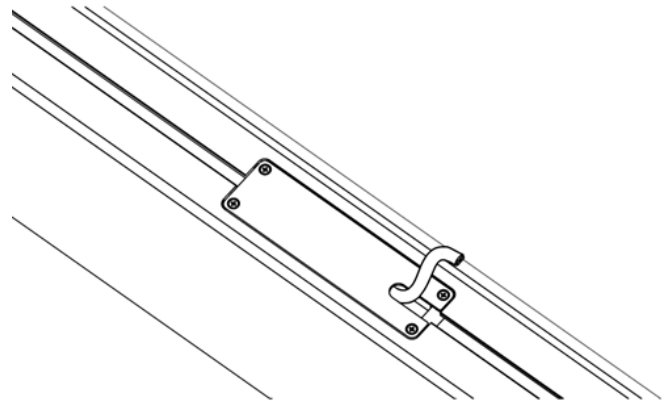
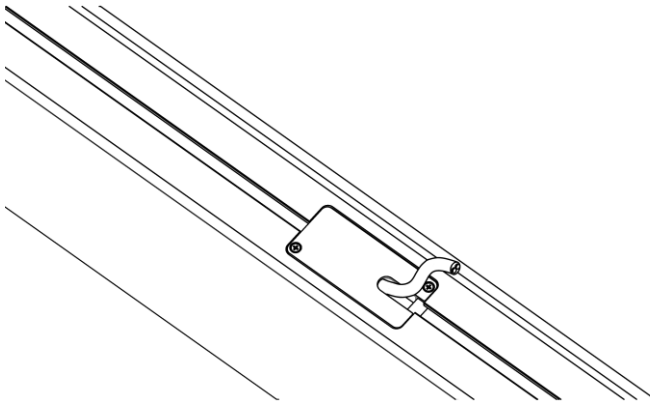
4.



5.



6.



3.2 Connections

All passive loudspeakers of the LXP series have a connection panel on the rear with a 2-pin terminal each as input (1) and link (3). The lug (2) offers the possibility of a strain relief for the connection cables.



3.3 setup and configuration

All loudspeakers in the LXP series are passive speaker systems for use with Fohhn amplifiers. For the best possible performance and optimum protection of the loudspeaker, the corresponding preset must be assigned to the amplifier channel to



Fohhn

which the loudspeaker is connected using Fohhn Audio Soft. To do this, you will need a Windows PC with the Fohhn Audio Soft control software installed (free download at www.fohhn.com).

4. Technical data

	LXP-10	LXP-60	LXP-100	LXP-150	LXP-220
Electroacoustic features					
acoustic design	compact weatherproof full range near field speaker system, 2-way coaxial	weatherproof full range line source speaker with vertical broadband passive beam alignment to -5			weatherproof full range line source speaker with vertical broadband passive beam alignment to -2
components	1x 4" long excursion woofer / 0,75" dome tweeter, with self-resetting IPC HF protection, neodymium components	4x 4" long excursion woofer / 1" compression driver, with self-resetting IPC HF protection, neodymium components	8x 4" long excursion woofer / 1" compression driver, with self-resetting IPC HF protection, neodymium components	12x 4" long excursion woofer / 1" compression driver, with self-resetting IPC HF protection, neodymium components	18x 4" long excursion woofer / 2x1" compression driver, with self-resetting IPC HF protection, neodymium components
power rating (nominal) [1]	60 W	240 W	480 W	720 W	900 W
power rating (programme) [2]	120 W	480 W	960 W	1440 W	1800 W
power rating (Peak) [3]	240 W	960 W	1920 W	2880 W	3600 W
maximum SPL [3]	106 dB	117 dB	123 dB	127 dB	129 dB
Maximum SPL with MA-x.100 [4]	100 dB	106 dB	110 dB	114 dB	115 dB
Maximum SPL with MA-x.600 [4]	106 dB	114 dB	118 dB	122 dB	124 dB
Maximum SPL with MA-x.1200 [4]	106 dB	117 dB	121 dB	125 dB	127 dB
Maximum SPL with DI-x.1000 [4]	106 dB	116 dB	120 dB	124 dB	126 dB
Maximum SPL with DI-x.2000 [4]	106 dB	117 dB	123 dB	127 dB	129 dB
Maximum SPL with DI-x.4000 [4]	106 dB	117 dB	123 dB	127 dB	129 dB
frequency range [5]	66 Hz – 20 kHz	50 Hz – 20 kHz	50 Hz – 20 kHz	50 Hz – 20 kHz	50 Hz – 20 kHz
nominal dispersion (h x v) [6]	100° x 100°	120° x 15°/-25°	120° x 10°/-20°	120° x 10°/-20°	120° x +6°/-10°
nominal impedance	8 Ω	8 Ω	8 Ω	4 Ω	4 Ω
physical features					
enclosure	weatherproof aluminium enclosure, powder coated				
protection grille	ball impact resistant steel grille, powder coated, backed by acoustically transparent 3D mesh				
mounting points	continuous T-slot at the rear				
protection class acc. to IEC529/EN60529	IP52 (IP54 mit Cable Gland Set)				
connections	2x 2-pin Phoenix terminal				
standard colours	black or white powder coated				
front design	front grille in enclosure colour				
dimensions (W x H xT)	133 x 130 x 128 mm	133 x 641 x 128 mm	133 x 991 x 128 mm	133 x 1465 x 128 mm	133 x 2201 x 128 mm
weight [7]	1,3 kg	5,2 kg	8,1 kg	11,2 kg	17 kg



optional features	
optional colours	all RAL-colours
weather protection	IP54 with Cable Gland Set
Hinweise	
[1]	according to IEC-60268-5 long term
[2]	according to IEC-60268-5 short term
[3]	Peak, 20 ms with bandpass filtered pink noise signal according to IEC 60268-2 at one octave above the lower limit of the frequency range
[4]	Peak, 20 ms with bandpass filtered pink noise signal according to IEC 60268-2 at one octave above the lower limit of the frequency range, with speaker preset
[5]	-10 dB under anechoic half space-conditions, with speaker preset
[6]	horizontal x vertical at -6 dB
[7]	net weight without optional equipment



5. Servicing and repair

Servicing and/or repairs should only be carried out by qualified personnel who have been trained by Fohhn.

To find the nearest Fohhn service centre, please contact us at the address given in this document.

Keep the packaging of the devices so that, in the event of any damage, it can be returned in its original packaging. This minimises the risk of transport damage.

6. Disposal

Please note that this product must not be disposed of with household waste but must be taken to a disposal point for electrical/electronic waste. Observe all applicable national or local legal regulations. For more information, please contact your local city office, your local waste transfer station or your local distributor.

7. EU declaration of conformity

We hereby certify that this product complies with the currently applicable standards of the EMC Act and that the CE mark shown here is therefore affixed to the product.

The EU declaration of conformity for this product can be downloaded from the Fohhn website www.fohhn.com under the respective product.



8. Contact address

Fohhn Audio AG
Großer Forst 15
72622 Nürtingen
Deutschland
Tel. +49 7022 93323-0
Fax +49 7022 93324-0
www.fohhn.com
info@fohhn.com